

Claims

1. An interface system comprising means for interfacing between a subscriber (2) and a mobile network element (4), in which communication with the subscriber is in a subscriber protocol, characterized in that:

the system comprises a request server (10) for receiving subscriber requests for services on the network element, and for transmitting responses to the subscriber (2);

the system comprises a network service provider (11);

the system comprises a request controller (10) comprising means for:-

receiving a client request from the request server (10),

invoking an operation on the network element (4) in response to the client request and using the service provider (12), and

delivering a network element response to the request server (10).

2. An interface system as claimed in claim 1, wherein the request server (10) comprises means for communicating with a subscriber using a Web server (20) Servlet with IIOP protocol between the request server (10) and the Web server (20) and HTML protocol between the Web server and the subscriber.

3. An interface system as claimed in claim 1, wherein the request server (10) has an object-oriented structure (Fig. 2) and comprises an object associated with each network element service.

4. An interface system as claimed in claim 3, wherein the request server (10) comprises a pool thread object comprising means for routing received requests to appropriate service objects.
5. An interface system as claimed in claim 4, wherein the request server comprises a thread filter object comprising means for filtering requests for the pool thread object.
6. An interface system as claimed in claim 5, wherein the thread filter and the pool thread objects comprises means for allowing concurrent connections to subscribers.
7. An interface system as claimed in claim 1, wherein the request controller comprises a MAP User (11) connected to the service provider for connection to an SS7 network, and wherein the service provider is a MAP service provider.
8. An interface system as claimed in claim 7, wherein the MAP User (11) comprises a message router and a dialogue manager, the message router comprising means for interfacing with the MAP service provider (12), and the dialogue manager comprising means for sending MAP messages for transfer to the MAP service provider.
9. An interface system as claimed in claim 8, wherein the dialogue manager comprises means for assigning resources to handle a MAP dialogue for each subscriber request and for maintaining a dialogue with the network element until the request has been resolved.

10. An interface system as claimed in claim 9, wherein the dialogue manager comprises means for recognising trigger messages as indicating a new dialogue.
- 5 11. An interface system as claimed in claim 10, wherein the dialogue manager comprises means for managing a MAP-based dialogue associated with each of a plurality of different types of trigger message.
- 10 12. An interface system as claimed in claim 7, wherein the MAP User (11) has an interface with the request server (10) for receiving requests, said interface comprising means for providing request services.
- 15 13. An interface system as claimed in claim 12, wherein a service is a registration service to register required information for a request.
14. An interface system as claimed in claim 12, wherein a service is an erasure service to erase information associated with a request.
- 20 15. An interface system as claimed in claim 12, wherein a service is an activation service to activate a request and subsequent invocation of an operation on the network element, and another service is a deactivation service to deactivate the request.
- 25 16. An interface system as claimed in claim 12, wherein a service is an interrogation service to query the status of a request.
17. An interface system as claimed in claim 12, wherein a service is a register password service to change subscriber security codes.

18. An interface system as claimed in claim 1, wherein the request controller comprises means for invoking an operation on a mobile network HLR.
19. An interface system as claimed in claim 18, wherein the request controller (11) comprises mean for invoking an operation associated with feature or supplementary services such as call barring , call forwarding, or call waiting.
20. A method for subscriber interfacing with a network element, the method comprising the steps of:
- transmitting a subscriber request in a subscriber protocol from a subscriber system to a request server;
- the request server delivering said request to a request controller;
- the request controller invoking an operation on the network element according to the request; and
- the request server delivering a response to the request.
21. A computer program product directly loadable into the internal memory of a digital computer and comprising software code portions for performing the steps of claim 20.